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Letter to the Editor

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Chronic cough and Sjogren's syndrome

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Dear Editor,

This year, i presented a study evaluating patients who presented with chronic cough in immunology allergy clinic.[2] Among the 106 patients evaluated, 11 were identified as experiencing cough secondary to Sjogren's syndrome. This represents a noteworthy proportion. Accordingly, i deemed it appropriate to compose this letter to provide a more detailed presentation of the clinical characteristics and findings observed in these patients

Cough is a defensive reflex for protect the lung from aspirationin normaly. It develops as a symptom in some diseases. If a cough lasts longer than eight weeks, it is considered a chronic cough. In some cases, it can be excessive, uncomfortable and take a long time. Chronic cough has many cause and the causes are different in children and adults. In adults most of them; astma, chronic obstructive pulmonary disease (COPD), seconder after viral enfections, gastroesophageal reflux disease/laryngopharyngeal reflux disease, tobacca use and etc. Despite extensive research, the cause may not be identified and this condition is mentioned in idiopathic chronic cough.[1]

Sjogren's syndrome have dry mouth and dry eye symptoms, especially due to lymphocyte infiltration in the exocrine glands. It can also occur with systemic involvement. The diversity of disease symptoms and differences in the course of the disease cause difficulties in the diagnosis of SS. There is no single gold standard diagnostic method such as pathology or laboratory findings. An attempt has been made to standardize diagnosis using criteria. The American College of Rheumatology and the European League Against Rheumatism (ACR-EULAR) updated the diagnostic criteria in 2017. According to these criteria, the diagnosis is established by scoring a combination of tests, including results of ocular dryness assessments (schimmer test), the presence of specific autoantibodies, histopathological evaluation of salivary gland tissue, and measurements of salivary flow rate. Salivary gland histopathological classification in SS was made by Chisholm and Mason[3] in 1968.

These diagnostic criteria are applied if certain conditions for the disease are met. These requirements include that in people with dry eye or mouth symptoms, the symptoms must last for at least three months, the need to use tear drops more than three times a day, a feeling of sand in the eyes, the need to eat dry foods with liquids, and the desire to drink water at night due to dry mouth. Diseases such as amyloidosis, sarcoidosis and hepatitis C should be excluded along with dry mouth due to anticholinergic drug use.[4]

In our study; in patients with chronic, long-standing cough of unknown etiology particularly when symptoms worsen during eating, when assistance with swallowing using liquids is required, and when physical examination reveals a dry, dehydrated tongue we considered the possibility of Sjogren's syndrome and proceeded with investigations in that direction.

The evaluation was performed in collaboration with the rheumatology department, using the diagnostic criteria recommended by the ACR-EULAR. Only two patients had a prior diagnosis of Sjogren's syndrome, while the initial clinical presentation in the remaining nine patients was chronic cough. In our study, the diagnosis rate of Sjogren's syndrome was determined to be 8.5%.[2] None of the patients showed evidence of systemic involvement. Among those previously diagnosed, clinical signs of arthritis were present. The other patients reported nonspecific arthralgia predominantly in small joints. None of the patients had elevated acute phase reactants. The clinical findings of these patients are presented in **Table**.

There were four patients with a history of hypertension. Two of the patients were using ACE inhibitors. Despite the switch to ARB blockers, their complaints continued, and dry mouth and eye symptoms were present, prompting further investigation and diagnosis.

All patients were female, with a mean age of 53 years. The most notable finding was the absence of systemic

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Table. Clinical findings in patients with Sjogren's syndrome presenting with chronic cough

Patients	Age	Gender	Duration of symtoms (year)	Comorbidity	RF	ANA pattern	ENA	Schimmer test	Chisholm-Mason score
Patient-1	56	Female	3	-	47	++ Reticular	-	8/10	2
Patient-2	44	Female	2	-	20	++ Centromere	Anti-Ssa++	4/5	Not done
Patient-3	50	Female	20	Hypertension	14	++ Granulare	Anti Ssa ++ AntiSm/RNP ++	3/2	Not done
Patient-4	44	Female	4	Hypothyroidis	10	+++ Homageneous	AntiSSb:++ Anti Ssa ++	2/2	Not done
Patient-5	60	Female	2	Hypertension	147	+ spotted	AntiSSa:++ AntidsDNA:+	5/5	Not done
Patient-6	55	Female	30	Hypertension	10	++ Homageneous	-	4/2	3
Patient-7	56	Female	1	-	8	+++ Centromere	-	4/4	2
Patient-8	45	Female	4	-	12	++ Nucleolar	-	-/-	2
Patient-9	54	Female	2	Hypertension	40	++ Homogeneous	AntiDsDNA +	4/2	Not done
Patient-10	52	Female	2	-	58	++ Granulare	-	2/-	Not done
Patient-11	58	Female	3	-	34	++ Granulare	-	-/-	3

involvement and arthritis symptoms in this cohort. Although symptoms of dry mouth and dry eyes were present, dryness and inflammation were confirmed through Schirmer's test and labial salivary gland biopsy. These patients had mild symptoms such as skin and oral dryness, which may not have significantly impacted their daily comfort, and thus likely did not prompt them to seek medical attention. However, due to their persistent cough, they were referred to the allergy clinic, where further investigations led to the diagnosis. It is known that there is a subset of Sjogren's syndrome patients without systemic involvement; however, even in such cases, arthritis is commonly observed.[4] In our patient group, arthralgia was present, but the lack of more extensive systemic symptoms suggests either that these patients were identified at an early stage of the disease or that they may represent a subclinical phenotype of Sjogren's syndrome, manifesting only with dryness of the mouth, eyes, and skin. There is no study in the literature describing the relationship between chronic cough and Sjogren's syndrome. Data related to Sjogren's syndrome is more commonly associated with systemic involvement. Pulmonary involvement is reported to be at a rate of 23% in the study by Kabasakal et al.[5] However, cases of cough due to mucosal dryness without pulmonary involvement have been reported in case series. This is presented in our study.[1] During the treatment, patients were warned about adequate daily fluid intake and advised to chew gum to stimulate salivary gland function. Antimuscarinic drugs such as pilocarpine have been recommended to increase salivation in patients whose daily lives are affected by dry mouth and cough. Only two patients required anticholinergic treatment. In the remaining patients, symptoms significantly improved but did not completely resolve after being informed about the treatment. Anticholinergic therapy was planned in case of symptom exacerbation. This letter was written to emphasize that this condition should be considered in the differential diagnosis of chronic cough, and that patients with Sjogren's syndrome may initially present with cough before a rheumatologic diagnosis is established.

ETHICAL DECLARATIONS

Referee Evaluation Process

Externally peer-reviewed.

Conflict of Interest Statement

The authors have no conflicts of interest to declare.

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Author Contributions

All of the authors declare that they have all participated in the design, execution, and analysis of the paper, and that they have approved the final version.

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